United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

IN REPLY REFER TO:

FWS/R6
FR-ES

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JUN 16 2006

Kerry C. Gee, Vice President
United Park City Mines Company
P.O. Box 1450
Park City, Utah 84060

Dear Mr. Gee:

I write to you concerning negotiations you are having with Region 8 of the U.S. Environmental Protection Agency (EPA) concerning the Richardson Flats Superfund Site (Site), located outside of Park City, Utah. On February 16, 2006, EPA provided notice to the Department of the Interior (Department) pursuant to section 104(b)(2) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). I understand that my staff from the Utah Field Office and Denver Regional Office have met with you and members of your team several times over the past two years concerning potential Natural Resource Damages claims at the Site and potential restoration actions that might be taken to resolve these claims. This letter sets forth some preliminary views of the Department and the U.S. Fish and Wildlife Service (Service) about the Site now that the remedy has been selected, and proposes a path forward for continuing our dialogue concerning the Site.

As an initial matter, the Service supports the remedy that was selected by EPA, and believes that its components (source removal, soil cover, wedge buttress, sediment cover in the diversion ditch and institutional controls) will improve the environmental condition at the Site. However, while protective of human health and the environment, the remedy as it is described in the Record of Decision (ROD) will not sufficiently restore, replace, or provide compensation for injured natural resources.

Trust Resource

Based on observations by Service biologists and conditions described in the 2003 Screening Ecological Risk Assessment (SERA), it is clear that the Department has trust resources that occur on and utilize the Site. As you know, trust resources can include species managed or controlled by the Department of the Interior, including their supporting ecosystems [40 C.F.R. § 300.600(b),

(b)(2), and (b)(3)]. Migratory birds and their habitats are some of the Department's many trust resources. Locations or "zones" at the Site where our trust resources may be injured include (but are not limited to):

- Silver Creek and its floodplain: Silver Creek flows through the western margin of the Site. The floodplain of the creek widens to include a wetland located at the toe of the embankment which forms a dike at the northwestern (down gradient) end of the tailings impoundment. This wetland supports a variety of waterfowl, other wetland birds, and migratory songbirds;

- Diversion Ditches and Pond: The diversion ditch encircles the eastern and southern margins of the tailings impoundment. The pond is located on the western margin of the impoundment, near the western end of the dike that contains the impounded tailings (see below). Although they are constructed features, the ditch and pond presently provide habitat for Service trust resources such as waterfowl and shorebirds;

- Impoundment Area: The Impoundment Area makes up a large portion of the Site and is where much of the mine tailings are contained. Some of these tailings are presently covered by a cap of clean fill material, however, the capping is not complete and there are areas of exposed tailings. The Impoundment Area also currently contains a 10-acre seasonal wetland that provides feeding and nesting habitat for waterfowl, shorebirds, and migratory songbirds. In past years, sand hill cranes and American coots have been observed nesting and raising young in this wetland area. In addition, there are several low-lying areas outside the impoundment area on its southern margin, and separated by the diversion ditch, which also provide seasonal wetlands that are used by trust resource species.

Although not included within the boundaries of the Site, the floodplain tailings located upstream of the impoundment, as well as tailings within the middle reach of Silver Creek above the Site, on land owned by United Park City Mines Company (UPCM) (which are alluded to in the ROD) are comprised of geographical areas that provide habitat or supporting ecological attributes for trust resources. Because these areas are upstream of the Site, they may also impact trust resources at the Site.

Injury to Trust Resources

As you know, section 107 of CERCLA authorizes Federal, State, and tribal governments, as Trustees, to bring claims for damages on behalf of the public for injury to natural resources caused by releases of hazardous substances. The measure of damages is the cost of restoring, replacing or acquiring the equivalent of the injured natural resources. Trustees may also recover the "reasonable and necessary" cost of assessing natural resource injury and the resulting damages, and economic value of losses the public suffers in the interim period between the date of the injury and the time of recovery to baseline (43 C.F.R. § 11.15). Trustees may also recover, among other things, administrative costs and expenses necessary for, and incidental to, restoration planning and oversight.

The Service has conducted a preliminary review of some of the information relevant to the Site, including the SERA for Richardson Flats Tailings Park City, Summit County, Utah, (U.S. EPA, 2003), data collected above, within, and below the Site by the Service and others in 2003, and EPA's ROD for the Site. Relative to our trust resources, the Service is particularly concerned about high concentrations of arsenic, cadmium, lead, mercury and zinc found in water, sediment, invertebrates, and forage fish. Below, the Service provides some observations about present conditions and potential injuries to natural resources at the Site that may have occurred, or which may result from implementation of the ROD and will not be addressed after completion of the remedy:

- Silver Creek Drainage and Floodplain: Notwithstanding the presence of upstream sources of hazardous substance releases, tailings piles adjacent to the creek within the Site (with the creek actually cutting through the tailings piles on the Site) contribute directly to contamination of the creek. Samples collected by the Service, the Utah Department of Environmental Quality and the U.S. Geological Survey in 2003 (relevant data tables are enclosed) indicate elevated concentrations of metals in water, sediment, invertebrates, and forage fish. A water sample collected within the boundaries of the Site had 277 milligrams per liter (mg/L) zinc, exceeding the ambient water quality criterion of 110 mg/L; lead was present in the water at 30.7 mg/L, compared to the ambient water quality criterion of 3.2 mg/L. Lead and mercury in the sediments of Silver Creek at this location were 15,600 milligrams per kilogram (mg/kg) and 56 mg/kg, respectively. These values are 121 and 53 times greater, for lead and mercury respectively, than consensus-based Probable Effects Concentrations (PECs) for sediment-dwelling organisms (upon which birds rely for food) of 128 mg/kg for lead and 1.06 mg/kg for mercury (Ingersoll, et al., 2000). Relative to direct toxic effects thresholds in birds for incidental ingestion of sediments while feeding, the concentration of lead in the sediment sample from the Site is 12 times greater than the lowest observed adverse effect level (LOAEL) of 1,304 mg/kg, and 24 times greater than the no observed adverse effect level (NOAEL) of 652 mg/kg used by the EPA in the 2003 SERA of the Site.

- Diversion Ditch, Pond, and Embankment Toe Wetland: At present, sediments in the diversion ditch around the tailings impoundment at the Site, and the wetland at the toe of the tailings impoundment embankment are also likely to have caused injuries to trust resource species and their supporting habitats. Data collected by UPCM to support the EPA's SERA indicate that the 95 percent upper confidence level[1] concentration of lead in these two areas is presently 3,042 and 6,520 milligrams per kilogram, respectively. These concentrations are 5 and 10 times greater than NOAELs and LOAELs for incidental ingestion of sediments for birds, and 24 and 51 times greater than the PECs for sediment dwelling organisms.

[1] 95% Upper Confidence Level (UCL_{95}) is a statistically derived value that describes the highest probable concentration (with 95% confidence) likely to be found in a sample area based on the distribution of data for the area. In cases where the statistically derived UCL_{95} is greater than the highest measured concentration, the latter is used to represent the upper limit of concentrations in the area.

- Impoundment Area: The tailings impoundment itself and the boundaries of the impoundment include areas where bare tailings are exposed on the ground surface, or where tailings themselves are only thinly covered. A large topographic depression located in the northern portion of the impoundment is thinly covered, or not covered at all, by clean fill; this area annually collects water to form a sizeable seasonal wetland of about 5-10 acres. Sandhill cranes, coots and other birds have been observed feeding, nesting and raising young in this area over several years. Metals concentrations around the margin of this wetland area are among the highest that were observed during the CERCLA Remedial Investigation. The center of the depression was not sampled during the remedial investigation, but it is possible that metals concentrations are higher towards the center than those observed on the margins of the depression because the fill is thinner or non-existent in that area. In areas with more adequate fill on top of the tailings (about 8 inches or more), 95 percent upper confidence level concentrations of lead exceed avian NOAELS and LOAELS for incidental ingestion by 4 to 7 times. The areas with exposed tailings that were sampled during the CERCLA Remedial Investigation have concentrations of lead that exceed avian incidental soil ingestion NOAELs and LOAELs by up to 100 times. The Service considers it likely that soils and sediments in the more central portions of this seasonal wetland have similar metals concentrations and may result in injury to trust resources. There currently are no data from the seasonal wetland and as a result this constitutes a data gap which may need to be addressed.

While concentrations of site-related contaminants will be reduced by removal of contaminated sediments and removal and/or capping of tailings piles, these actions will also cause injury to trust resources. For example, the capping of exposed tailings at the Tailings Impoundment will reduce the size of the seasonal wetland habitats used by migratory birds. As another example, capping contaminated sediments in the diversion ditches with 12 inches of clean gravel may affect the bottom substrate of the ditches potentially making it less suitable for sediment-dwelling invertebrates that serve as food for Service trust resource species. Any other remedial actions that involve capping or dewatering areas that currently have wetland habitat value will also reduce the value of those habitats, causing injury to Service trust resources. These injuries may be temporary, such as if sediment organisms are able to recolonize the diversion ditches after clean sediments have had time to accumulate over the clean gravel, or may be permanent, such as the loss involved in capping the low-lying wetland area in the impoundment. The time-discounted magnitude of these injuries will depend on the length of time involved in recovery to baseline habitat values.

Next Steps

The Service staff would like to meet with UPCM to discuss how to proceed cooperatively in this matter. Topics for our discussion might include:

- Identification of data gaps and how and when any additional data might be collected at the Site, the costs of data collection, and who should conduct and pay for such activities;

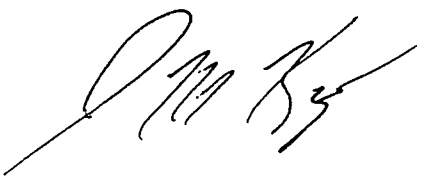
- How restoration of trust resources and the ecosystems on which they rely that occur at the Site might be integrated with the remedy that has been selected, how restoration can be timed and phased to prevent potential recontamination and how any proposed restoration work implemented in the near future can be credited to UPCM;

- The need for a confidentiality agreement for any Natural Resource Damages settlement discussions we might have concerning the Site.

Our meeting may also be an opportunity for the Service to learn about restoration alternatives you believe make sense for the middle reach of Silver Creek, in light of the ongoing Silver Creek Stakeholder process. Moreover, to the extent that any information is necessary to assess potential natural resource injuries at the Bureau of Land Management's Silver Maple Claims parcel located upstream from the Richardson Flats Site, Service believes that such activities could be integrated and coordinated with additional assessment and/or restoration activities for the Richardson Flats Site. The Service fully understands that such an integrated approach would require participation by BLM staff. Finally, involvement by representatives of the State of Utah natural resource trustee agencies may also ensure a streamlined and robust assessment and restoration process.

I greatly appreciate the efforts UPCM has made to take a proactive approach towards natural resource restoration at the Richardson Flats Tailings site. We also appreciate your responsiveness to the needs of the Service—your expertise and knowledge about Silver Creek has been invaluable. We look forward to working with your company to restore the Department's trust natural resources. Please contact Christine Cline at the Utah Field Office, (801) 975-3330, extension 145, to schedule a meeting among the parties so we may continue our dialogue about the Site.

Sincerely,



J. Mitch King, Regional Director
DOI Authorized Official,
Richardson Flats NRDAR Case

References:

Ingersoll, C.G., D.D. MacDonald, et al., 2000. Prediction of sediment toxicity using consensus-based freshwater sediment quality guidelines. United States Geological Survey (USGS) Final Report for U.S. Environmental Protection Agency (USEPA) Great Lakes National Program Office (GLNPO). USEPA Report No. EPA 905/R-00/007, June 2000.

U.S. EPA, 2003. Richardson Flats Tailings Site Screening Ecological Risk Assessment Draft Final Report.

Enclosures

cc: Dianne Nielson, State of Utah
Department of Environmental Quality
Glenn Carpenter, Salt Lake City
Field Office Manager, BLM
Mark Elmer, U.S. Department of Justice
Kathy Hernandez, U.S. Environmental
Protection Agency

TABLE 1. Metals Concentrations in Samples Collected by USFWS at Richardson Flats Tailings Site, Park City, Utah

WATER SAMPLE-- results in µg/l (parts per million)

	Arsenic	Cadmium	Copper	Lead	Mercury [2]	Zinc
	<5.0	**4.5**	<12.0	**26**	<0.2	**1,300**
Benchmark Values:						
AWQC [1]	190	1.1	12	3.2	--	110

SEDIMENT SAMPLE-- results in mg/kg (parts per million) dry weight

	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc
	637	**99.9**	*622*	**15,600**	**56.0**	**24,860**
Benchmark Values:						
PEC, invertebrates [3]	33.0	4.98	149	128	1.06	459
LOAEL dose(sediment ingestion), mallard duck [4]	5,783	1,790	4,265	1,433	160	55,700
NOAEL dose(sediment ingestion), mallard duck [5]	578	59.7	3,199	614	80.0	22,280

KEY	
Italic	*Observed concentration in sample > PEC*
Bold	Observed concentration in sample > avian NOAEL dose equivalent
Bold Shaded	Observed concentration in sample > avian LOAEL dose equivalent

MACROINVERTEBRATE SAMPLES-- results in mg/kg (parts per million) wet weight

Sample Type (Species)	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc
Caddis Fly	**5.91**	**4.20**	11.2	**83.6**	0.14	**495**
Caddis Fly	2.77	**1.86**	5.91	**34.1**	0.07	**200**
Red Side Shiner	2.10	**0.50**	2.57	**25.2**	0.10	**168**
Spotted Dace	1.58	**1.32**	6.59	**14.0**	0.05	**431**
Tipulidae	**15.0**	**3.42**	**18.1**	**206**	**0.36**	**688**
Benchmark Values:						
LOAEL dose(dietary ingestion), mallard duck [4]	25.7	9.02	27.4	5.07	0.63	270
NOAEL dose(dietary ingestion), mallard duck [5]	3.00	0.36	13.7	3.38	0.32	135

KEY	
Bold	Observed concentration in sample > avian NOAEL dose equivalent
Bold Shaded	Observed concentration in sample > avian LOAEL dose equivalent

NOTES:

(1) AWQC: Ambient Water Quality Criteria under the Clean Water Act (CWA), U.S. Environmental Protection Agency

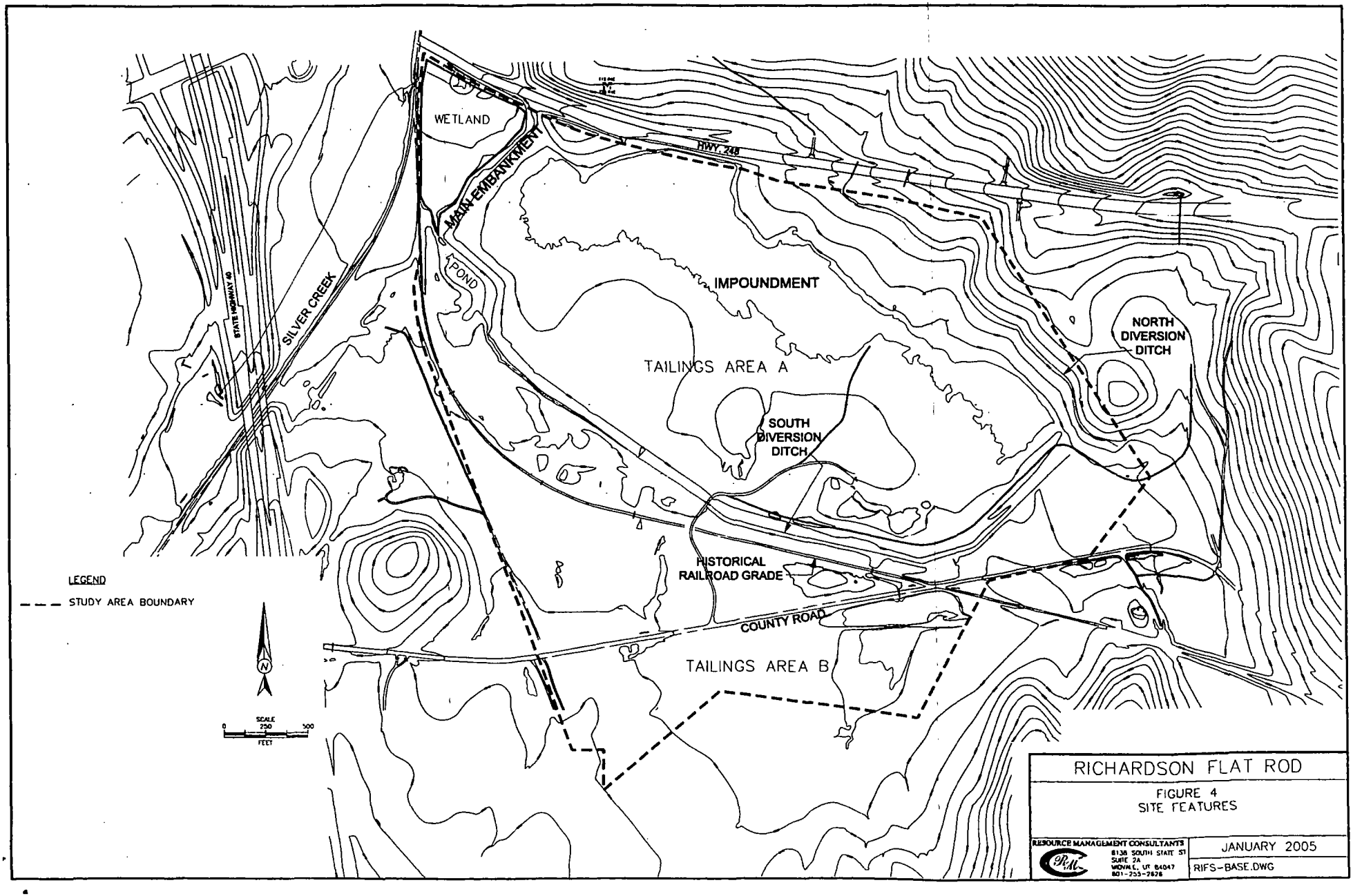
(2) There is no SCDM freshwater benchmark for mercury. The SCDM Drinking Water Maximum Contaminant Level (MCL; drinking water) for mercury is 2 ug/l.

(3) PEC: Probable Effects Concentration (the concentration above which adverse effects to the macroinvertebrate community (e.g., species diversity, abundance, occurrence of pollution-intolerant species) are likely. Ingersoll, C.G., D.D. MacDonald, et al., 2000. Prediction of sediment toxicity using consensus-based freshwater sediment quality guidelines. United States Geological Survey (USGS) Final Report for U.S. Environmental Protection Agency (USEPA) Great Lakes National Program Office (GLNPO). USEPA Report No. EPA 905/R-00/007. June 2000

(4) LOAEL: Lowest Observed Adverse Effect Level. Dietary Dose concentrations calculated using Toxicity Reference Values and exposure parameters presented in "Screening Ecological Risk Assessment (SERA) for Richardson Flats Tailings Site, Park City, Utah" (USEPA, 2003)

(5) NOAEL: No Observed Adverse Effect Level. Dietary dose concentrations calculated using Toxicity Reference Values and exposure parameters presented in "Screening Ecological Risk Assessment (SERA) for Richardson Flats Tailings Site, Park City, Utah" (USEPA, 2003)

(6) Toxicity Reference Values based on organic mercury



RICHARDSON FLAT ROD

FIGURE 4
SITE FEATURES

RESOURCE MANAGEMENT CONSULTANTS
8138 SOUTH STATE ST
SUITE 2A
MIDVALE, UT 84047
801-255-2626

JANUARY 2005

RIFS-BASE.DWG